

Natural Play: Making a difference to children's learning and wellbeing

A longitudinal study of the Forestry Commission Scotland-Glasgow City Council-Merrylee Primary School partnership 2008-2011

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Overview

Natural Play: Making a difference to children's learning and wellbeing presents the findings of a longitudinal study of the pioneering partnership between Forestry Commission Scotland, Glasgow City Council and Merrylee Primary School in Glasgow. It provides evidence to show that children's engagement with a natural play space within school grounds has a multitude of positive impacts on their learning and physical and emotional wellbeing. The study also provides a value-for-money assessment, concluding that the cost of developing natural play spaces is comparable with those of building traditional tarmac playgrounds. In view of the benefits outlined in the report, it is argued that the provision of a natural playspace within school grounds represents excellent value for money.



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Background

The natural play in school grounds project was the first of its kind in the United Kingdom. It was therefore important to capture data to evidence whether or not the project's efforts to create a natural play space has made a difference to the children's learning and wellbeing. The study answers important questions, such as:

- Can a natural play space lead to enhanced emotional and physical wellbeing for children, compared with a traditional playground space?
- Can a natural play space lead to enhanced classroom-based and outdoor-based learning for children, compared with a traditional playground space?
- Do natural play spaces in school settings offer good value for money?

Method

The study took a participatory and inclusive approach. It included children, teachers, parents, playground support and Forestry Commission staff. Evidence was collected through three principal means: a literature review; a baseline study in 2008 exploring how children used the traditional 'tarmac and turf' play space to which they had access; a follow-up study in 2011 exploring how children were using the new natural play space, which incorporates topography such as hills, valleys, steps, meadow area, hollows, shrubs and trees, willow tunnels, dead wood, a rope bridge and seating.

In terms of attribution of results, it must be noted that in 2011 the children also had access to a full-size, all-weather, astro turf football pitch. As far as possible, the study attempts to isolate impacts that can be directly attributable to the natural play space, although it is inevitably impossible to completely separate the influence of each play space.

Similar methods were used in both 2008 and 2011 in order to ensure comparability of findings. These consisted of:

- participant observation across the different playareas in morning and lunchtime breaks over a three-day period;

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- one hour focus group discussions with 30 children, broken up into 4 groups of P2, P3, P5 and P6;
- physical activity measurement, through the use of pedometers fitted to children;
- participatory photography;
- focus group discussions with separate groups of teachers, playground staff and parents;
- weekly reporting forms by teachers; and
- daily reporting forms used by playground staff to monitor a set of given indicators.



Results

Conducting a 'before and after' study was a helpful way of evidencing the impact of introducing a natural play space into the school environment. The research highlights some key results: some of which stand for themselves, and some which require further study and analysis.

- **Indicators of emotional wellbeing improved. There has been:**
 - a reduction in the reporting of bullying;
 - a dramatic reduction in physical injuries;
 - increased opportunities for free, imaginative and creative play;
 - enhanced social interaction between different groups of children, including between boys and girls, and different age groups;
 - enhanced options for solitude, where needed, and for children who may not be interested in football/tarmac-based activities to thrive and flourish; and

- enhanced opportunities for interacting with nature at playtime.
- **Physical activity levels increased.** The natural play space encourages children to use different muscle groups. In addition, compared with the baseline study, there was evidence of an increase in the accumulated number of steps and in the minutes of physical activity across all year groups for both boys and girls over the school day. The increase is equivalent to 10% of their daily recommended minutes and steps. This cannot be solely attributed to the natural play space as the astro turf space has also had an important role to play. However, observation alone clearly demonstrates that physical activity is a key activity on the natural play space.
- **Positive impact on children's indoor learning.** It is not possible to assess the impact of the natural play space in isolation from the development of the new school buildings and changes in the curriculum. However, teachers felt that the natural play space has contributed to:
 - increased punctuality when returning to class after play;
 - improvement in the time needed to settle back into class;
 - improvement in mood after play;
 - increased concentration and attainment levels after play;
 - increase in the quality of social interaction with other pupils and teachers; and
 - decrease in incidents of difficult behaviour.



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- **Outdoor learning increased**, indicating that natural play spaces are complementary to the 2010 Curriculum for Excellence for Outdoor Learning.
- **The research also indicates that natural play may be beneficial for teachers and in enhancing children's access to, and enjoyment of, nature and outdoor play.**
- Experience of natural play has led to a change in **the attitudes and behaviours of playground supervisors and staff towards risk, and increased scope for children to risk assess and take decisions for themselves. Children's exposure to risk, and responsibility for assessing risk has led to a demonstrable increase in resilience.**
- A cost-benefit analysis shows that developing a natural play space in school grounds comes at a comparable cost to developing a traditional tarmac playground. In view of the benefits outlined in the report, **the provision of a natural play space within school grounds represents excellent value for money.**

Conclusion

The research shows that working in partnership to design and build high quality outdoor spaces can support both learning and healthy behaviour – including physical activity and exercise, stimulation of the senses, increased interaction between different year groups, interest groups, between boys and girls, and an increase in the aesthetic experience of contact with nature. It is thus clear that there are significant benefits to engaging children in natural

play within school settings, which come with a comparable price tag to a traditional tarmac playground. Natural play is therefore an important initiative that local authorities and education departments can take to create, transform and revitalise school grounds with respect of the human experience, encouraging greater use of the outdoors by staff and pupils. Natural play spaces provide a positive distraction from hard, engineered spaces consisting of tarmac and concrete, and incorporate quiet, reflective areas for children to flourish and develop their imagination; while learning to engage with nature.

Next Steps

Forestry Commission Scotland will use the natural play development at Merrylee Primary School and the associated report as a best practice example. It will showcase what can be delivered within school grounds, and the benefits thereof, in order to encourage similar developments. Specific actions will be required to this effect. These include:

- encouraging education departments to consider natural play for any new build or school redevelopment;
- highlighting the gap in planning between built and natural environments surrounding schools;
- producing a design guidance booklet which includes case studies; and
- facilitating visits to natural play sites for headteachers and planners.

Partners

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